

II. CLAIMS

1. (Original) A mobile communication terminal comprising a loudspeaker with a non-flat frequency response, an amplifier and an equalizer for at least partially compensating the non-flat frequency response of said loudspeaker through frequency selective attenuation, characterized by comprising means for decreasing said frequency selective attenuation to increase the volume of the sound reproduced by said loudspeaker when a maximum amplification by said amplifier has already been reached.
2. (Original) A mobile communication terminal according to claim 1, characterized in that said frequency selective attenuation is decreased by decreasing the attenuation for all frequencies reproduced.
3. (Previously Presented) A mobile communication terminal according to claim 1, characterized in that said frequency selective attenuation is decreased by changing the characteristic of said equalizer.
4. (Previously Presented) A mobile communication terminal according to claim 2, characterized in that said means for decreasing said frequency selective attenuation are arranged to gradually decrease said frequency selective attenuation with increasing volume setting.
5. (Original) A mobile communication terminal according to claim 4, characterized in that said means for decreasing said frequency selective attenuation are set to obtain

substantially zero attenuation of all frequencies reproduced at a maximum volume setting.

6. (Previously Presented) A mobile communication terminal according to claim 4, characterized by comprising means for adjusting the amplification level of said means for amplifying, said means for adjusting the amplification level being arranged to maintain the amplification at a maximum level when said volume setting is reduced until said means for decreasing said frequency selective attenuation has increased the attenuation factor to a level at which a substantially linear frequency response of said loudspeaker is obtained.

7. (Previously Presented) A mobile communication terminal according to claim 3, characterized in that said means for adjusting the amount of said frequency selective attenuation are arranged to adapt the profile of the frequency response of the loudspeaker system increasingly to the hearing curve of the human ear, preferably as defined in ISO 226:1987, with decreasing volume setting.

8-10. (Cancelled)

11. (Original) A sound reproduction system for a mobile communication terminal comprising a loudspeaker with a non-flat frequency response, an amplifier and an equalizer for at least partially compensating the non-flat frequency response of said loudspeaker through frequency selective attenuation, characterized in that said audio system comprises means for adjusting the frequency response characteristic of said equalizer depending on the type of audio signal reproduced.

12. (Original) A sound reproduction system according to claim 11, characterized in that said type of audio signals comprise speech signals, speech signals for use with a headset, speech signals for use with a loudspeaker, music signals, ringing tones and alarms.

13. (Original) A sound reproduction system according to claim 11, characterized by comprising means for automatically adjusting the frequency response of said equalizer when a speech signal is reproduced to obtain a substantially flat frequency response of said loudspeaker.

14. (Original) A sound reproduction system according to claim 11, characterized by comprising means for automatically adjusting the frequency response of said equalizer when a speech signal is reproduced to obtain a frequency response of said loudspeaker that substantially corresponds to normal equal-loudness level contours as defined in ISO 226:1987.

15. (Original) A sound reproduction system according to claim 11, characterized by comprising means for automatically adjusting the frequency response of said equalizer when a music signal is reproduced to obtain a low attenuation of the low-frequency part of the sound reproduced.

16. (Original) A sound reproduction system according to claim 11, characterized by comprising means for automatically adjusting the frequency response of said equalizer when a music signal is reproduced to obtain a high attenuation of mid-frequency part of the sound reproduced.

17. (Original) A sound reproduction system according to claim 11, characterized by comprising means for automatically adjusting the frequency response of said equalizer when a ringing signal or an alarm signal is reproduced to a substantially zero attenuation of all frequencies of the sound reproduced.

18. (Previously Presented) A method of controlling the volume of sound produced by an audio system for a mobile communication terminal, said audio system comprising a loudspeaker with a non-flat frequency response, means for amplifying an audio signal, an equalizer for at least partially compensating the non-flat frequency response of said loudspeaker by frequency selective attenuation and input means allowing user input for increasing or decreasing the volume, comprising:

increasing the amplification of said audio signal when an input for increasing the volume is received and a maximum amplification has not yet been reached,

decreasing the frequency selective attenuation of said equalizer when input for increasing the volume is received and the maximum amplification has already been reached,

increasing the frequency selective attenuation of said equalizer when an input for decreasing the volume is received and the frequency selective attenuation is below a desired setting for frequency selective attenuation, and

decreasing the amplification of said audio signal when input for decreasing the perceived loudness is received and the attenuation level of said equalizer is at the desired setting for frequency selective attenuation.

19. (Previously Presented) The method of claim 18 further comprising that the frequency selective attenuation is decreased by decreasing the attenuation for all frequencies reproduced.
20. (Previously Presented) The method of claim 18 further comprising that the frequency selective attenuation is decreased by changing the characteristic of the equalizer.